

REMARKS

Introduction

Reconsideration is respectfully requested in view of Applicant's amendments and remarks herein. At this time, Applicant has amended the claims to avoid the anticipation rejections set forth in the Office Action. Further, as explained below in detail, the unpatentability rejection is untenable and needs to be reconsidered and withdrawn. Since it is earnestly believed that all claims are now in condition for allowance, objected-to claim 6 has not been rewritten in independent form at this time. Early indication of allowability is respectfully solicited.

Claim 5 has been changed to independent claim format for avoiding any potential antecedent basis problem with respect to amended claim 1.

The 35 U.S.C. 102(e) anticipation rejections of paragraphs 3 and 4 of the Office Action

In paragraph 3 of the Office Action, claims 1 – 3, 5, 7, 11 – 13 and 15 are rejected as being anticipated by Munnelly et al '460. In paragraph 4 of the Office Action, claims 1 – 3, 5, 7, 11 – 13 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Munnelly et al '811.

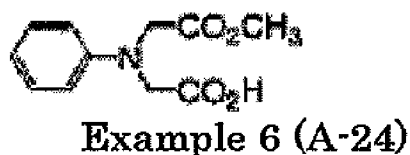
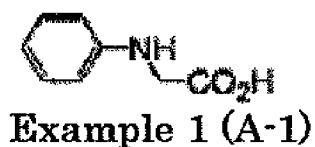
In each of these rejections, (3,4-dimethoxyphenylthio)acetic acid is cited as a compound of Applicant's formula (I) and (I-2). All generic claims have been amended to delete -S- from the definitions for X and X¹, thereby avoiding both of the anticipation rejections. Since all of the claims rejected in paragraphs 3 and 4 of the Office Action are novel over the Munnelly et al '460 and '811 references, it is respectfully requested that the anticipation rejections be reconsidered and withdrawn.

The unpatentability rejection under 35 U.S.C. 103(a) of paragraph 6 of the Office Action

In paragraph 6 of the Office Action, claims 1 – 3, 5, 7, 8, 10 – 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable (obvious) over Munnelly et al ‘939. The Examiner relies upon claim 13 of the reference, in which compound (c) is part of an initiator system. The Examiner submits that compound (c) of the reference when R^{10} is an alkoxycarbonyl group or a carboxyalkyl group would meet the definition of compound (I) or (I-2) of Applicant’s claims.

In Applicant’s claims, X or X^1 can be, inter alia, $-N(R^3)-$ in which R^3 is a monovalent substituent other than a hydrogen atom. On the other hand, in Munnelly et al ‘939, R^{10} is not especially limited, but can be, for example, a hydrogen atom or another carboxy group, the latter of course not being monovalent, but resulting in a polycarboxylic acid compound for part of the initiator system. In fact, the reference prefers that its compound (c) contain at least two carboxy groups (paragraph [0118] at lines 3 – 4 on page 11) and these are preferably N-arylpolycarboxylic acids of formula (B) at [0160]. In contrast, in the present invention, as explained on page 38, lines 16 and 22, Applicant’s limited $-N(R^3)-$ is preferred for use in Applicant’s invention from the viewpoints of sensitivity and storage stability. This preference is demonstrated by the working examples in the present application, particularly in comparison with the generalized teachings of the Munnelly et al ‘939 reference.

The Examiner is first of all kindly requested to compare in Table 2 at pages 168 – 169 of the present specification, Example 1 in which R^3 is a hydrogen atom as shown in compound (A-1) at the top of page 41 of the specification with Example 6 in which R^3 is, as an example, $-\text{CO}_2\text{CH}_3$ as shown in compound (A-24) on page 42 of the specification, that is other than H. Example 6 is superior in both sensitivity and printing resistance (printing durability).



Next, the Examiner is kindly requested to note Comparative Example 2 of Table 2, in which in place of the monocarboxylic acid compound of Applicant's claims, compound (H-1) is employed as depicted on page 160 of the present specification, and as duplicated below:



Compound (H-1) is the type of polycarboxylic compound (B) preferred by the reference [0160]. In fact, in the Examples of Munnelly et al '939, the polycarboxylic compound N-phenyliminodiacetic acid is employed (See Table 1, 5th ingredient at [0172]), which is the same as compound (H-1) except for the presence of the methyl group substituent on the phenyl ring in compound (H-1). Both sensitivity and printing resistance (printing durability) are inferior when using the polycarboxylic acid type compound preferred by the reference.

Finally, regarding the comparative experimentation in the application as filed, the Examiner is respectfully requested to review Examples 55 and 73, of Tables 4 and 5 at pages 180 and 185 of the specification, respectively, and other examples of those tables as discussed below. Examples 55 and 73 employ as the carboxylic compound, compound 41, which as depicted on page 17 of the application as filed, is N-phenyliminodiacetic acid, or the preferred compound of Munnelly et al '939, which compound is also used in the examples of the reference as discussed above.

With respect to Table 4, Examples 40 and 45 to 48 use the same radical initiator and infrared absorber as in Example 55; however, comparison of the sensitivity values in these examples shown the superior sensitivity of the examples within the present claims (Examples 40 and 45 to 48) as compared with the use of the compound of the reference (Example 55), even though a smaller amount of the carboxylic acid compound is used in Examples 40, 45, 46 and 48. These results could never be expected from the teachings of Munnelly et al '939.

With respect to Table 5, the situation is similar to that discussed above for Table 4. Examples 57 to 60 and 62 to 71 use the same or a smaller amount of the carboxylic acid compound than in Example 73, and all of these Examples show a higher sensitivity and higher printing resistance (printing durability) than that of Example 73. Again, these results could not be expected from the teachings of Munnelly et al '939.

In summary as to the 103(a) rejection based on Munnelly et al '939, the reference does not make any distinction regarding its carboxylic compound, except in teaching directly away from the present invention; the reference prefers and exemplifies the employment of a dicarboxylic acid compound, and not a monocarboxylic acid compound as required by Applicant's claims, and shown to be unexpectedly superior in sensitivity and printing resistance in comparison with the preferred dicarboxylic acids (including the preferred N-phenyliminodiacetic acid) of Munnelly et al '939. Clearly, all claims are unobvious over Munnelly et al '939. Reconsideration and withdrawal of the 103(a) rejection based on Munnelly et al '939 are respectfully requested.

Conclusion

In view of the above, reconsideration and allowance are now believed to be in order, and are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the listed telephone number.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/Brett S. Sylvester/
Brett S. Sylvester
Registration No. 32,765

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON DC SUGHRUE/265550

65565

CUSTOMER NUMBER

Date: October 24, 2007